Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A random number generator comprising:

a pair of ~~independent free-running~~ oscillators comprising a pair of inverters, each of the pair of oscillators having a feedback loop which when closed causes the respective oscillator to be an independent free-running oscillator;

at least one delay device connected ~~between~~ in the feedback loop between an output and input of at least one of the pair of oscillators; ~~wherein an input signal of one oscillator is connected to an output of another oscillator of said pair of oscillators~~

a pair of cross gate switches, each of which respectively connects an input of one oscillator to an output of another oscillator.

2. (original) The random number generator according to claim 1, having a plurality of switches for controlling a timing connection of an input and an output of said pair of inverters.

3. (original) The random number generator according to claim 2, wherein the plurality of switches equals four.

4. (original) The random number generator according to claim 2, wherein at least one of the plurality of switches comprises at least one feedback loop switch connected between a respective output and respective input of at least one oscillator of the pair of oscillators.

5. (canceled)

6. (canceled)

7. (canceled)

8. (original) The random number generator according to claim 2, wherein the plurality of switches are controlled by a flip-flop.

9. (original) The random number generator according to claim 4, wherein the set of switches are controlled by a flip-flop.

10. (currently amended) The random number generator according to claim 1 ~~5~~, wherein the plurality of switches are controlled by a flip-flop.

11. (currently amended) The random number generator according to claim 4 ~~6~~, wherein the plurality of switches are controlled by a flip-flop.

12. (original) The random number generator according to claim 4, wherein the feedback loop switches comprise parallel complementary MOSFETs.

13. (original) The random number generator according to claim 4, wherein the feedback loop switches are comprised of multiplexors.

14. (currently amended) The random number generator according to claim 4 ~~7~~, wherein at least some of the switches are comprised of multiplexors.

15. (currently amended) The random number generator according to claim 4 ~~7~~, wherein ~~when~~ said switches comprise a pair of feedback loop switches connected so that the pair of oscillators form a bi-stable device with positive feedback resolving to a logic state when the cross gate switches are closed and the feedback loop switches are opened.

16. (original) The random number generator according to claim 15, wherein subsequent to the closing of said feedback loop switches and opening the cross gate switches, a latching device is connected to at least one of the oscillator outputs to permit a reading of a random generated bit when said cross gate switches are reopened.

17. (original) The random number generator according to claim 16, wherein at least some of the switches are comprised of multiplexors.

18. (original) The apparatus according to claim 1, wherein the delay device comprises two delay devices having mutually different numbers of buffer gates.

19. (currently amended) The apparatus according to claim 1, wherein the delay device comprises two delay devices having mutually different numbers of inverters.

20. (original) The apparatus according to claim 15, wherein subsequent to the closing of said feedback loop switches and opening the cross gate switches, a relative and absolute value of the instantaneous output voltage and the internal noise determine the logic state the random number generator will settle in after the feedback loop switches are opened to stop the oscillator.

21. (original) The apparatus according to claim 20, wherein the random number generator reaches a metastable state upon closing the feedback loop switches to start the oscillator.

22. (original) The apparatus according to claim 20, wherein the random number generator reaches a metastable state by opening the feedback loop switches and permitting oscillator voltages to resolve to their final value.

23. (currently amended) A method for providing a metastable random number generator, comprising:

(a) connecting a pair of ~~independent free-running~~ oscillators, so that each output is fed back to the respective input of the oscillators via a delay device to form a pair of independent free-running oscillators, wherein each of the oscillators comprises an inverter; and

(b) connecting an input signal of one oscillator to an output of another oscillator of said pair of oscillators and disconnecting the feedback to the respective outputs of the oscillators;

wherein (b) further comprises connecting a pair of cross gate switches, each of which respectively connects an input of one inverter to an output of another inverter

of said pair of oscillators.

24. (canceled)

25. (canceled)

26. (currently amended) The method according to claim 23 ~~25~~ further comprising (d) providing each of the pair of inverters with a feedback loop switch.

27. (currently amended) The method according to claim 26 ~~24~~ wherein the pair of inverters form a bi-stable device with positive feedback resolving to a logic state by opening said feedback loop switches and closing the cross gate switches are closed.

28. (currently amended) The method according to claim 27 wherein subsequent to the closing of said feedback loop switches and opening the cross gate switches, (e) connecting a latching mechanism to at least one of the oscillator outputs so as to permit a reading of a random generated bit when said cross gate switches are reopened.

29. (original) The method according to claim 23, wherein the delay devices are provided with mutually different numbers of buffer gates.

30. (original) The method according to claim 23, wherein the delay devices comprise mutually different numbers of inverters.

31. (original) The method according to claim 28 wherein subsequent to the opening of said feedback loop switches and closing the cross gate switches, to stop the oscillators, a relative and absolute value of the instantaneous output voltage of the oscillator and the internal noise determine the logic state in which the random number generator will settle in.

32. (currently amended) The method according to claim 28, wherein ~~the~~ subsequent to the random number generator reaching a metastable state, opening the cross gate switches and closing the feedback loop switches to start the oscillators.

33. (original) The method according to claim 28, wherein the random number generator reaches a metastable state by closing the cross gate switches and opening the feedback loop switches and permitting oscillator voltages to be latched and the latch to resolve to a final logic value.

34. (original) The method according to claim 28, wherein the random number generator reaches a metastable state by opening the feedback loop switches while closing the cross-gate switches and permitting a latch formed by the pair of inverters to settle to a logic state in a metastable way by oscillation periods getting gradually longer until voltages resolve to a final value.

35. (original) The method of according to claim 34 wherein at least some of the switches are comprised of multiplexors.